



PATENT

Docket No: 744.708

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Lee, Razgo  
Application No: 09/881,140  
Filed: June 14, 2001  
For: SELF-SIZING SUN VISOR  
Art Unit: 3765  
Examiner: James G. Smith

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November 1, 2002  
Assistant Commissioner for Patents  
Washington, D.C. 20231

NOV - 7 2002

TECHNOLOGY CENTER R3700

**RESPONSE TO THE AUGUST 1, 2002, OFFICE ACTION**

Commissioner:

This response is submitted in a timely fashion within the three-month Shortened Statutory Period set for response to the Examiner's Official Action mailed August 1, 2002. No extensions of time are required.

The amendments to the claims and the specification have been made without the addition of new matter.

Claims 1 through 6 and 8 through 19 remain in this application.

**A. 35 U.S.C. §102 (b) Anticipation Rejection**

In the August 1, 2002 office action, the Examiner rejects claims 1-4, 10, 11, 12 and 16-19

under 35 U.S.C. §102 (b) as being anticipated by Cunliffe (5,966,742).

The Examiner's rejection on the above stated ground is traversed for several reasons.

The prior art reference relied upon by the examiner must contain every element, in the same detail and the same arrangement as recited in applicant's claim to be a sustainable 35 U.S.C. §102 (b) rejection.

**First, the band element of Cunliffe is not capable of supporting the bill without the structural rigidity provided by the crown portion, so the band and crown elements of Cunliffe must be taken together and not separated as suggested by the Examiner.**

Cunliffe relies upon the structural combination of the crown and the band to support the bill. Cunliffe does not state why the front of the crown is preferably a "substantially non-stretchable, more rigid material." The increased rigidity is needed to support the cantilevered bill secured to the front of the crown structure.

A cantilevered structure in static equilibrium will produce a vertical load component and a bending moment component. The vertical load component is equal to the mass of the cantilevered structure. The bending moment component is equal to the vertical load component multiplied by the length of the moment arm. The bending moment component is measured in units of distance and mass, for instance, ft-lbs. In order for a structure to hold a cantilevered element in static equilibrium, it must be stiff enough to provide a static reaction force capable of resisting and reacting out the vertical load component and bending moment component.

A bill, like any over cantilevered structure, will have a vertical load component and a bending moment component that must be reacted or distributed by the supporting structure so that it can remain in static equilibrium. It is well known in stress analysis that as a structure

becomes stiffer, the vertical load component and bending moment loading it can resist increases.

While the hypothetical person of ordinary skill in the art probably does not perform a stress analysis when designing a hat, it is well known that the leading edge of a visor that is not properly supported will droop down to obscure the vision of the wearer or cant upward at an extreme angle significantly reducing the shading capability of the visor and giving the wearer an un-sightful appearance.

Applicant respectfully submits that one of ordinary skill in the art knows that the front of the crown of a cap must be made from a substantially more rigid material or stiff structure to react and resist the loads created by the bill. In United States patent number 6,199,213 (Whang), starting on line 50 of column 4 it states that, “the frontal panels 31 of the embodiments of the present invention as shown in FIGS. 2 and 3 may be constructed of more rigid material than either the flexible gores 20 or the outer portion 28 that encircles the head. This allows the headwear to support the visor 21 so it extends from the headwear.” Applicant respectfully submits that Whang establishes the level of skill of one of ordinary skill in the art.

Applicant respectfully submits that the interconnected front portion of the Cunliffe crown of a “substantially non-stretchable, more rigid material” is required to properly support the bill and react the vertical load component and the bending moment component throughout the crown and into the wearer’s head.

The Cunliffe band by itself cannot properly resist and react the loads created by the cantilevered bill. The front portion (of the band) is of multilayer construction. It has “a central core layer of porous, foam-like absorbent material and outer cover layers of fabric” (see Cunliffe starting on line 65 of column 1). The front portion is more rigid than the back portion. When the relatively narrow front portion is combined with the stretchable back portion, the band, by itself

does not have the structural rigidity to properly support the cantilevered visor. Cunliffe relies upon the combination of the band and the crown to react or direct the load induced by the visor into the wearer's head.

Therefore, while Cunliffe does disclose a headband and a visor or bill portion, the crown portion must be included to provide proper support of the bill. Cunliffe as modified by the does not function like Applicant's device so it does not anticipate it. The loop element is not present in Cunliffe and the rejection is unsupported by the art and should be withdrawn. The rejection is unsupported by the art and Applicant respectfully requests that it be withdrawn.

**While Cunliffe does disclose a bill or visor, it does not disclose or claim a type of head wear known in the art as a visor.**

Applicant respectfully submits that while the drawings included with Cunliffe depict a bill or visor attached to the front of the crown of the cap, the type of hat known in the art as a visor is not disclosed or claimed.

Applicant submits that Whang establishes that a visor is an open crown cap with a bill mounted onto the front. Starting on column 4, on line 1, Whang describes figure 3 as follows: "FIG. 3 shows a completed embodiment of the present invention in the form of a visor." At column 4, on line 41, Whang further states that, "FIG. 3 shows a view of a visor-like hat that is one embodiment of the present invention. The visor-like hat has a visor 21 and an outer portion 28 that encircles the head." Applicant submits that Whang discloses a type of hat that is well known to a person of ordinary skill in the art as a visor.

Further, applicant submits that Whang also establishes what a person of ordinary skill in the art knows as a baseball cap. Starting in column 3, on line 66, it describes figure 2 as follows:

"FIG. 2 shows a completed embodiment of the present invention in the form of a baseball cap."

Applicant submits that Whang discloses a type of hat that is well known to a person of ordinary skill in the art as a baseball cap.

Finally, the Whang visor-like hat depicted in figure 3 has an open crown. The top of the wearer's head receives no protection from the elements. The hat disclosed by Cunliffe has a closed crown. The top of the head of the wearer of a Cunliffe cap receives protection from the elements. Applicant respectfully submits that the hat disclosed by Cunliffe has a baseball cap configuration.

Applicant respectfully submits that Cunliffe does not disclose "a self-sizing visor" as stated by the Examiner in the August 1, 2002 Office Action and asks that this rejection be removed.

**The Cunliffe band element is formed from two parts.**

The Cunliffe band element has two parts. Starting in column 3, on line 6, Cunliffe discloses, "thus, the rear, stretchable band portion has a length of approximately 1/3 that of the cap peripheral opening, while the front, sweat band portion has a length of approximately 2/3 of the length of the peripheral opening. This provides sufficient adjustability while allowing maximum comfort to the wearer due to the extension of the sweat absorbent portion over the front and sides of the cap." Each part is of a significantly different structure to satisfy significantly different wearer requirements. Applicant does not disclose this type of structure. Applicant respectfully traverses the rejection because Cunliffe discloses a two-part band.

**Cunliffe doe not disclose a multilayer, non-stretchable sweat absorbing material**

**"being attached to the headband".**

The front portion of the Cunliffe band is constructed from a multilayer, non-stretchable, sweat, absorbing material. Starting in column 1, on line 65, Cunliffe discloses, "while the front portion is of multilayer construction, comprising a central core layer of porous, foam-like absorbent material and outer cover layers of fabric." The Cunliffe band is located along the inside peripheral edge of the crown. This would place it behind the visor. The front portion of the Cunliffe band does not stretch. It does not compress against the head of the wearer because it is wrapped in "outer cover layers of fabric" and therefore does not affect the fit of the cap. The sweat absorbing structure employed by Cunliffe is within and integral to the band. Applicant respectfully submits that this is entirely contrary to the Examiner's contention that the sweat absorbing material "being attached to the headband". Applicant respectfully asks that this rejection be removed.

Furthermore, Applicant's foam liner performs two functions, not just one. In claim 4, Applicant claims "a sweat absorbing foam liner being attached to said inner surface of said headband to facilitate a comfortable snug fit." It absorbs sweat. In addition, it also increases the comfort of the fit of the cap. The foam softly compresses against the head of the wearer to provide another means of fitting the visor to various head sizes and shapes.

Applicant respectfully submits that the front portion of the Cunliffe band does not perform the dual functions of sweat absorption and facilitating "a comfortable snug fit" and asks that this rejection be removed.

**The combination of the stretchable sweatband sewn to the inner surface of an "outer portion" does not anticipate each and every element as set forth in applicant's device.**

A sweatband is “a band lining the bottom of the inside of the crown of a hat or cap to protect it against sweat from the head “as defined in The Random House College Dictionary (1973). The Board Of Patent Appeals And Interferences of the United States Patent And Trademark Office used the above definition for a sweatband on line 2 of page 6 to form their opinion on Appeal No. 96-3012 of Application Serial Number 08/202,975.

Whang discloses a sweatband under this definition. Starting in column 4, on line 47 Whang discloses, “the lower edge 29 of the sweatband 26 is attached to the inside of the lower peripheral edge 23 of the outer portion 28 of the invention. Figure 3 of Whang also shows a sweatband attached on the inside of the outer portion running upwards from the lower peripheral edge. Whang further discloses, starting in column 2, on line 60, that, “additionally, the polyester and polyester/SPANDEX blend materials of the sweatband of the present invention are more absorbent than the uni-axial elastics of the current state of the art which incorporate rubber. Therefore, the Whang sweatband is a band lining the bottom of the inside of the visor-like cap to protect it against sweat from the head. The Whang sweatband satisfies the above definition for a sweatband. Applicant simply does not disclose a structure that would satisfy the definition of a sweatband.

**Whang discloses a loop with a core and an exterior shell.**

Whang discloses a loop with a core and an exterior shell. Starting in column 4, on line 12, Whang discloses a sweatband “composed of an interior core 14 and an exterior shell or layer 15. The interior core 14 may be made of polyester. The exterior shell or layer 15 may be made of a mix of cotton and spandex.” Applicant obviously does not disclose this type of structure.

**The Whang sweatband is sewn to the inside surface of the “outer portion”.**

The Whang sweatband is sewn to the inside surface of the “outer portion”. Starting in

column 4, on line 44 Whang discloses, "the flexible stitching 30 of the sweatband 26 is arranged circumferentially." Applicant does not disclose this type of structure.

**Whang uses a combination of non-stretchable bias cut fabric and an inner sweatband to achieve a fit for the head of the wearer**

Whang discloses a visor-like hat with an "outer portion" made of non-stretchable "bias cut fabric aligned at varying angles to achieve the maximum natural multi-axial stretch of said fabric" (Whang line 10 column 3). Whang states that an advantage of using ordinary cloth (line 1 column 3) is that, "the gores of the cap structure use existing and unaltered materials which do not have elastics incorporated therein. Instead, the flexibility of the cap structure comes from manner in which the gores are aligned." The non-stretchable fabric will allow limited expansion of the "outer portion." The non-stretchable fabric of the "outer portion" provides no contraction capability. The sweatband is attached to the outer portion by circumferential rows of evenly spaced stitching. Whang relies upon the sweatband stitched to the inside of the "outer portion" to provide contraction for a "snug, comfortable and non-oppressive fit". Separately, the sweatband and the "outer portion" perform two different functions. Applicant clearly does not disclose this type of structure.

Whang does not anticipate each and every element as set forth by applicant, so a rejection based upon Whang is unsupported by the art.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

November 1, 2002

Respectfully submitted,



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